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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/626,916	07/25/2003	David Wei Wang	68.0345	2409

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EXAMINER	
HOUSE, LETORIA G	

ART UNIT	PAPER NUMBER
3672	

DATE MAILED: 04/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/626,916	WANG ET AL.	
	Examiner	Art Unit	
	Letoria House	3672	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *07/25/2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-21* is/are pending in the application.

4a) Of the above claim(s) *14-20* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-13, and 21* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☒ Claim(s) *1-21* are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *07/25/2003*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:

   I. Claims 1-13, and 21, drawn to a screen apparatus, classified in class 166, subclass 230.

   II. Claims 14-20, drawn to a method of making a screen, classified in class 29, subclass 896.61.

The inventions are distinct, each from the other because of the following reasons:

Inventions II and I are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case the product as claimed can be made by another process such as weaving fibers to interlock the filter layers or using a mechanical, longitudinal joint to interlock the layers.

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

Because these inventions are distinct for the reasons given above and the search required for Group I is not required for Group II, restriction for examination purposes as indicated is proper. Because these inventions are distinct for the reasons

given above and have acquired a separate status in the art because of their recognized divergent subject matter, restriction for examination purposes as indicated is proper.

During a telephone conversation with Jaime A. Castano on March 23, 2005 a provisional election was made without traverse to prosecute the invention of Group I, claims 1-13 and 21. Affirmation of this election must be made by applicant in replying to this Office action. Claims 14-20 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-7, 12-13, and 21 are rejected under 35 U.S.C. 102(b) as being anticipated by Whitlock et al. (U.S. 6,006,829).

Whitlock et al. discloses a mesh screen apparatus comprising:

- A mesh medium having interlocking layers of mesh material (23) a base pipe (10) having openings (12) in its sidewall and onto which the mesh medium is mounted such that the mesh medium covers the openings. (Figures 1, 2, and 3).
- The mesh material comprising fiber strands, the fiber strands arranged in orthogonal layers, where the fiber strands are metallic. (Figures 1, 2, and 3; column 6 lines 43-52). The Examiner defines orthogonal arrangement to mean intersecting at right angles. (See Merriam-Webster's Collegiate Dictionary, Tenth ed. 1993).
- A tubular mesh medium, the mesh screen apparatus having a seamless tubular mesh medium. (Figures 1, 2, and 3; column 5 lines 5-14).
- The mesh screen apparatus in which the mesh medium has a porosity (Column 6 lines 31-36), standard mesh incorporated as one of the layers (Item 23 of Figures 2 and 3), and the mesh medium covers only a portion of the base pipe (Figures 1, 2, and 3).
- A mesh medium having interlocking layers of mesh material; and a piece of equipment which the mesh medium at least partially encloses such that the mesh medium prevents infiltration of particulates into the equipment (Figures 1, 2, and 3).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and

the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 8-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Whitlock et al. (U.S. 6,006,829) in view of Schulte (U.S. 6,237,780).

Whitlock et al. discloses an apparatus as states above. However, the reference fails to teach the mesh screen apparatus in which the mesh material comprises fiber strands and the porosity is determined by the thickness of the fiber strands, the mesh material having strands of variable diameter and the porosity is variable across the

mesh medium, and the mesh material comprises fiber strands and the porosity us determined by the diameter and number of openings in the mesh medium.

Schulte teaches a mesh screen apparatus that includes a screen where the mesh material comprises fiber strands and the porosity is determined by the thickness of the fiber strands, the mesh material having strands of variable diameter and the porosity is variable across the mesh medium, and the mesh material comprises fiber strands and the porosity us determined by the diameter and number of openings in the mesh medium (Figure 15) for the purpose of attaining finer particle separation to increase the percentage of impurities removed from the screened fluid.

It would have been obvious to one of ordinary skill in the art at the time of the invention to have provided a the screen of Whitlock et al. with the fiber strands of variable diameter and thickness of Schulte to improve particle separation and reduce the need to frequently clean the screen, thereby maintaining the desired flow rate.

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Eifling (U.S. 4,696,751) discloses a screening apparatus for removing suspended solids from liquid comprised of multiple layers. Koehler et al. (U.S. 5,664,628) discloses a filter medium with a sintered supported porous membrane. Koehler (U.S. 4,613,369) discloses a method of making a porous metal article. Arterbury et al. (U.S. 5,293,935) discloses a pre-pack well screen concentrically mounted in radially spaced relation on a perforated mandrel. Sato et al. (U.S. 3,871,411) discloses a seamless screen pipe comprising a seamless tubular screen

made of organic fiber and a metal film formed on the surface and a method for producing a seamless screen pipe. Richard et al. (U.S. 5,611,399) discloses a sand-filtering screen making technique wherein a mechanical, longitudinal overlap-type joint is used to interlock layered filtering screens.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Letoria House whose telephone number is (571) 272-8118. The examiner can normally be reached on M-F, 7:00 A.M. - 4:00 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Bagnell can be reached on (571) 272-6999. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

David Bagnell
Supervisory Patent Examiner
Art Unit 3672

LGH